

REMARKS

The Final Office Action mailed September 8, 2005, has been received and reviewed. Claims 1 through 9 are currently pending in the application. Claims 1 through 9 stand rejected. Claims 10 through 29 have been withdrawn from consideration. Applicant proposes to amend claim 1, and respectfully requests reconsideration of the application as proposed to be amended herein.

35 U.S.C. § 112 Claim Rejections

Claims 1 through 9 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant respectfully traverses this rejection, as hereinafter set forth, however, Applicant proposes to amend independent claim 1 to delete “the spaced apart source and drain regions and the gate forming a transistor planar with the substrate” as rejected in the Office Action.

Accordingly, Applicant respectfully requests the rejection be withdrawn.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on U.S. Patent No. 5,136,349 to Yilmaz et al.

Claims 1, 2, 5, and 7-9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yilmaz et al. (U.S. Patent No. 5,136,349). Applicant respectfully traverses this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicant submits that the Yilmaz reference does not and cannot anticipate under 35 U.S.C. § 102 the presently claimed invention of presently amended independent claim 1 and

claims 2-9 depending therefrom, because the Yilmaz reference does not describe, either expressly or inherently, the identical inventions in as complete detail as are contained in the claims.

Amended Independent Claim 1 and Claims 2, 5, 7-9 Depending Therefrom

The Office Action alleges:

With regard to claims 1 and 5, Yilmaz et al. disclose a closed cell transistor with built-in voltage clamp (col. 4, line 34 to col. 10, line 45 and fig. 3), comprising:

Spaced-apart source 48a and drain 48b regions formed in the substrate 60 (fig. 3a);

Channel region 64 defined between the source 48a and drain 48b regions (col. 5, line 51 and fig. 3a);

A layer of gate oxide 74 formed over at least a part of the channel region 64 (col. 5, lines 19-20 and fig. 3a);

A gate 46 formed over the layer gate oxide 74, the gate 46 further having at least one implant aperture formed (fig. 3a), the channel region 64 of the substrate 60 further including a channel internal implanted (enhancement) region 40 between the source 48a and drain 48b regions (col. 5, lines 60-65 and fig. 3a). The spaced-apart source and drain regions and the gate forming a transistor planar with the substrate (col. 3, lines 21-38). (Office Action, p. 3; emphasis added).

Applicant respectfully disagrees that the Yilmaz reference anticipates Applicant's invention as claimed in amended independent claim 1 which reads:

1. A threshold-adjusted transistor, comprising:
a substrate including:
spaced-apart source and drain regions formed in the substrate; and
a channel region defined between the source and drain regions;
a layer of gate oxide formed over at least a part of the channel region; and
a gate formed over the layer of gate oxide, the gate further having at least one implant aperture formed therein, the channel region of the substrate further including a channel internal implanted region between the source and drain regions, *the source and drain regions each including lightly doped extensions under the gate and the lightly doped extensions and the channel internal implanted region being substantially equivalently doped.* (Emphasis added.)

In contrast, the Yilmaz reference discloses:

P+ region 40 is the clamping region which is at the center of a preferably substantially radially symmetric (i.e., square) active cell 42 of the device. The *active cell 42 includes the N+source* (for DMOSFET) or emitter (for

an IGBT) *region 44a, 44b . . .* (Yilmaz, col. 4, lines 38-42; emphasis added).

The typical width of the *P+ type clamping region 40* is about 10 microns. This width is defined to accommodate a minimum sized electrical contact to the *P+ type clamping region 40*. The width of the cell 42 is typically about 30 to 40 microns. This includes the *N+ type region 44a*, the gate region 46, the *P+ type region 40* and *the other N+ type region 44b* as defined when the diffusions are masked. (Yilmaz, col. 7, lines 47-54; emphasis added).

Clearly, the Yilmaz reference discloses a device on a substrate, however, the aperture opens the gate to receive and form therebelow a P+ type clamping region 40 (Fig. 3A) with N+ type source and drain regions 44a and 44b. In contrast, Applicant claims “a channel internal implanted region between the source and drain regions, *the source and drain regions each including lightly doped extensions under the gate and the lightly doped extensions and the channel internal implanted region being substantially equivalently doped.*”

Therefore, amended independent claim 1, and claims 2-9 depending therefrom, are not anticipated by the Yilmaz reference under 35 U.S.C. § 102. Accordingly, such claims are allowable over the cited prior art and Applicant respectfully requests that such rejections be withdrawn.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 5,136,349 to Yilmaz et al.

Claims 3 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yilmaz et al. (U.S. Patent No. 5,136,349). Applicant respectfully traverses this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable

expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The 35 U.S.C. § 103(a) obviousness rejections of claims 3 and 6 are improper because the nonobviousness of independent claim 1 precludes a rejection of claims 3 and 6 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the rejection to independent claim 1 and claims 3 and 6 which depend therefrom.

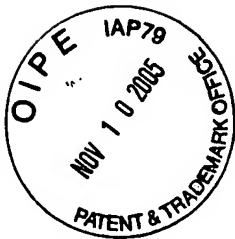
Obviousness Rejection Based on U.S. Patent No. 5,136,349 to Yilmaz et al. in view of U.S. Patent No. 6,649,461 B1 to Lai et al.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Yilmaz et al. (U.S. Patent No. 5,136,349) in view of Lai et al. (U.S. Patent No. 6,649,461 B1). Applicant respectfully traverses this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

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The 35 U.S.C. § 103(a) obviousness rejection of claim 4 is improper because the nonobviousness of independent claim 1 precludes a rejection of claim 4 which depends therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the rejection to independent claim 1 and claim 4 which depend therefrom.



Serial No. 10/690,399

ENTRY OF AMENDMENTS

The proposed amendments to claim 1 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments do not raise new issues or require a further search. Finally, if the Examiner determines that the amendments do not place the application in condition for allowance, entry is respectfully requested upon filing of a Notice of Appeal herein.

CONCLUSION

Claims 1 through 9 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,

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